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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,477	01/29/2004	Motomi Kohno	31721-200490	3729

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EXAMINER	
HAGEMAN, MARK	
ART UNIT	**PAPER NUMBER**
3653	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/766,477	KOHNO, MOTOMI	
	Examiner	Art Unit	
	Mark Hageman	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5,10 and 12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1* is/are allowed.

6)☒ Claim(s) *3,5,10, 12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-21-2007 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 5, 10, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claims 3 and 10 both have a secondary air blowing unit and a tertiary air blowing unit without and first or primary air blowing unit. This renders the claims indefinite, as it is not clear from the claim if there is a primary air source. As understood by the examiner the primary air is introduced by the raw grain-feeding unit with the raw grains. An amendment clearly claiming a primary air blowing unit or the feeder unit blowing primary air etc. would overcome this rejection.

5. Claim 3 also introduces "an exhaust port" in line 3 and then in lines 8+ discusses a lightweight grain-separating unit. It is unclear if these are two separate elements or how the two elements are related. Is the exhaust port part of the lightweight grain separating unit? Furthermore examiner contends that the language "against the whirling direction of the raw grains" is functional and relates the structure of the apparatus (the exhaust port and/or lightweight grain separating unit) to the contents thereof (the air and grains) during operation. Therefore this language is not given patentable weight (see MPEP 2114 and 2115). When the machine is not in use there is no whirling direction.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ikebuchi. Ikebuchi discloses a cylindrical section (20) forming a primary separation space having an opening of an a horizontal exhaust pipe for discharging air having the powder bodies at an upper portion thereof (4 and figure 2); a conical section (1a) forming a secondary separation space provided on a downside of the cylindrical section; a grain feeding unit (13 and c2 lines 50+) for feeding grains containing the powder bodies into the cylindrical section from a lower port of the cylindrical section so as to

whirl in the cylindrical section in a direction-along an inner periphery of the cylindrical section; a secondary air blowing unit (19) for blowing high-pressure air at a lower portion of the conical section from a circumferential slit (figure 2) on the conical section toward the grains containing the powder bodies being dropped from the cylindrical section on an upwardly beveled surface of a stabilizer to move the powder bodies upward to the cylindrical section (c4 lines 2+); a tertiary air blowing unit (18) for blowing tertiary fresh air into a tertiary separation space provided below the secondary separation space; and a unit for discharging (figure 2) the grains from under the tertiary separation space.

Re claim 12, the secondary air-blowing unit has a secondary air intake chamber (figure 2 lower portion) surrounding the slit that blows a high-speed secondary airflow through the slit toward an upwardly beveled surface of a stabilizer (upper surface of 5) provided at a lower end of the conical section (figure 2). Examiner contends that the stabilizer is partially located in the lower end of the conical section and that the secondary air does travel toward the upwardly beveled surface.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikebuchi in view of Green. Ikebuchi discloses a cylindrical section (20) having an exhaust port (4) at an upper portion thereof; a conical section (1a) provided below the cylindrical section; a raw grain feeding unit for feeding raw grains into the cylindrical section to whirl the raw grains upward along an inner periphery of the cylindrical section above the conical section (13 and c2 lines 50+); a lightweight grain separating unit (1) for taking air having the lightweight grains in the raw grains out from the upper portion of the cylindrical section against the whirling direction of the raw grains; a secondary air blowing unit (19) for blowing the secondary air toward the raw grains being dropped from the cylindrical section upward at a lower portion of the conical section to move fine grains upward to the cylindrical section (c4 lines 2+) wherein the secondary air blowing unit blows a high-speed fresh secondary airflow into a chamber that surrounds a slit formed between an upwardly beveled surface of a stabilizer (5) and a lower end of the conical section; and a tertiary air blowing unit (18) blowing tertiary fresh air upward from below the conical section into a chamber bounded by the stabilizer and a unit for discharging separated heavier raw grains away from the stabilizer (figure 2). Ikebuchi does not disclose the exhaust port being tangential to an inner peripheral wall of the cylinder. Green discloses the exhaust port is tangential to an inner peripheral wall of the cylinder and opposite to the whirling direction (18 figure 2) for the purpose of improving the classification efficiency (c1 lines 26+ and c3 lines 59+).

It would have been obvious to one of ordinary skill in the art at the time of the

applicant's invention to have modified Ikebuchi to include the orientation of the exhaust port, as taught by Green, for the purpose of improving the classification efficiency. As discussed previously in this office action the language, "against the whirling direction of the raw grains" is functional and relates the structure of the apparatus (the exhaust port and/or lightweight grain separating unit) to the contents thereof (the air and grains) during operation. Therefore this language is not given patentable weight (see MPEP 2114 and 2115). When the machine is not in use there is no whirling direction. Regarding the "chamber that surrounds a slit formed between an upwardly beveled surface of a stabilizer and a lower end of the conical section" examiner contends that this chamber is a region of the internal volume and that as defined in the claim it extends the upwardly beveled surface to the lower end of the conical section. Therefore in Ikebuchi the chamber extends from the upwardly angled face of the stabilizer (5) to the lower portion of the conical section (1a).

Re claim 5 Ikebuchi discloses, the secondary air-blowing unit comprises a secondary air intake chamber (figure 2 lower portion) connected via a slit (figure 2 and c3 lines 62+) provided at the lower end of the conical section for taking compressed air therefrom (figure 2).

Allowable Subject Matter

10. Claim 1 is allowed.

11. The following is a statement of reasons for the indication of allowable subject matter: Claim 1 positively sets forth the location of the upwardly beveled surface of the

stabilizer as centrally located in the lower portion of the conical secondary section. The prior art does not show this specific configuration of the stabilizer in combination with the other limitations of the claim. Furthermore as a method claim the language regarding the whirling direction and the various other air flows that is considered to be functional in the device claims is given patentable weight in the method claim.

Response to Arguments

12. Applicant's arguments filed 6-21-2007 have been fully considered but they are not persuasive. Applicant stated, "Ikebuchi does not disclose a secondary air blowing unit that blows a high-speed fresh secondary airflow into a chamber that surrounds a slit formed between an upwardly beveled surface of a stabilizer (5) and a lower end of the conical section." Examiner disagrees and maintains that Ikebuchi does disclose the claimed limitations as set forth above. Examiner contends that the chamber is defined as the area between an upwardly beveled surface of a stabilizer (top of 5 in Ikebuchi) and a lower end of the conical section. Ikebuchi does blow secondary air into a chamber as defined as seen in figure 2. Regarding the orientation of the exhaust port and the lightweight grain separation unit these arguments are moot in view of the new grounds of rejection incorporating the Green reference and the discussion above regarding the "opposite the whirling direction" language.

Regarding claim 10 applicant stated, "no reasonable combination of Ikebuchi and Green discloses or suggests a cylindrical section forming a primary separation space having an opening of a horizontal exhaust pipe for discharging air having the powder

bodies at an upper portion thereof." Examiner disagrees and contends that as amended Ikebuchi anticipates the claim. Ikebuchi discloses a cylindrical section (20) forming a primary separation space having an opening (4) of a horizontal exhaust pipe (portion of pipe above separator) for discharging air having the powder bodies at an upper portion thereof (figure 2). Examiner contends that as amended the opening need not be horizontal but only a portion of the exhaust pipe itself. Applicant also stated, " no reasonable combination of Ikebuchi and Green discloses or suggest a grain feeding unit for feeding grains containing the powder bodies into the cylindrical section from a lower port of the cylindrical section." Examiner disagrees and maintains that Ikebuchi anticipates the claim in that inlet (13) provides the necessary function and is located below the top of the cylindrical section. Nothing in the claim actually says what the feeding unit is lower than. The claim recites "a lower port" but fails to give any reference as to what the port is lower than. Therefore as interpreted by the examiner any port below the top of the cylindrical section would anticipate the claimed limitations. Applicant also stated, "no reasonable combination of Ikebuchi and Green discloses or suggests a secondary air blowing unit for blowing high-pressure air... on an upwardly beveled surface of a stabilizer." Examine disagrees and maintains that the air from the secondary air unit in Ikebuchi travels upward towards the upwardly beveled surface of the stabilizer (5). Further examiner contends that as amended the air need not be blown on the upwardly beveled surface as the claim can readily be interpreted as the powder bodies are dropped on the upwardly beveled surface as opposed to the intended and alternate interpretation where the air is blown on the upwardly beveled

surface. Examiner maintains that Ikebuchi anticipates the claim under either interpretation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Hageman whose telephone number is (571) 272-3027. The examiner can normally be reached on M-F 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on (571) 272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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